IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MASSACHUSETTS

BRAUN GMBH,)
Plaintiff,)
v.) Civil Action No. 03-1248-WGY
RAYOVAC CORPORATION,)
Defendant.))

THIRD EXPERT REPORT OF SAMUEL R. PHILLIPS, PE

1. I am an independent consulting engineer, serving over 120 clients. I have been retained as an expert in this case by Rayovac Corporation ("Rayovac") to opine as to whether certain of Braun Gmbh's patents are invalid. Specifically, I have been asked to respond to Dr. Nayfeh's rebuttal of my First Expert Report.

I. BACKGROUND AND QUALIFICATIONS

- 2. My background and qualifications are set forth at Tab 1 of my First Expert Report.
 - 3. My compensation is \$425.00/hour through FTI/Teklicon.

II. SCOPE OF STUDY AND OPINION

- DOCUMENTS AND INFORMATION CONSIDERED IN Α. FORMING OPINIONS
- 4. The following opinions and analyses are based upon a review of the information listed at Tab 3 of my First Expert Report.

EXHIBIT O

ATTORNEY EYES ONLY

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5. Additional information I considered in responding to certain opinions expressed by Dr. Nayfeh is listed at Tab 1.

В. SUMMARY OF OPINIONS

- 6. After my review of Dr. Nayfeh's second expert report, it remains my opinion that all of the asserted claims of the '556 patent are invalid for anticipation, obviousness, indefiniteness, lack of an adequate written description, improper introduction of new matter, failure to join an inventor, and/or failure to disclose the best mode.
- 7. After my review of Dr. Nayfeh's second expert report, it remains my opinion that all of the asserted claims of the '328 patent are invalid for anticipation, obviousness, indefiniteness, lack of an adequate written description, improper introduction of new matter, failure to join an inventor, and/or failure to disclose the best mode.
- 8. At trial, I anticipate giving a basic tutorial that will assist the Court and/or the jury in understanding the technology applicable to the patents in suit and the prior art.

C. LEVEL OF ORDINARY SKILL IN THE ART

- 9. Dr. Nayfeh states that he does not believe that there is a dispute between the parties as to the level of ordinary skill in the art. (Second Nayfeh Report, at 13 n. 1.) It is, however, not clear to me that the parties are in agreement.
- 10. It remains my opinion that the ordinary artisan would have possessed at least 3-5 years of relevant industry experience following his or her education. To the

extent that Dr. Nayfeh's use of a "few years" means the same thing as 3-5 years, there is no disagreement on that score.

- 11. However, it does appear that the parties disagree as to what constitutes the "art." In his response to my opinion regarding indefiniteness, Dr. Nayfeh at least cites to Braun's arguments during prosecution that the Lee and Schinn Patents constitute nonanalogous art. By citing Braun's arguments, it appears that Dr. Nayfeh believes that the arguments were correct. If that is the case, I disagree.
- 12. As explained at Paragraphs 19-25 of my First Expert Report, it is my opinion that the "art" of the patents-in-suit is not limited to cleaning systems for shavers. Rather, the "art" is cleaning systems in general, and there is a broad range of prior art cleaning systems such as the Lee and Schinn Patents that are not non-analogous art. If, however, Dr. Nayfeh agrees with me as to what constitutes the relevant "art," then there is no dispute between the parties.

III. DETAILED CONCLUSIONS FOR THE PATENTS-IN-SUIT

INDEFINITENESS A.

13. I understand that a claim term is indefinite if it does not reasonably apprise those of skill in the art of its scope. I further understand that the Court tentatively construed the claim elements "a cradle structure adapted to receive therein the shaving head" and "a cradle structure adapted to receive therein the shaving head" to both mean "a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both." It remains my opinion that the "cradle structure"

elements, as tentatively construed by the Court, do not reasonably apprise an ordinary artisan as to their scope.

- Dr. Navfeh states that he disagrees with me that the Court's tentative 14. claim construction does not reasonably apprise an ordinary artisan as to claim scope. Rather than analyzing the Court's tentative construction, however, Dr. Nayfeh then looks to the McGraw-Hill Dictionary of Scientific and Technical Terms to opine: "[O]ne of ordinary skill in the art would recognize that the claimed cradle structure was a framework for supporting an object -- in this case, a framework adapted for supporting and receiving the shaving head of a dry shaving apparatus." (Second Nayfeh Report, at 22.) I disagree with Dr. Nayfeh's redefinition of the Court's tentative construction as follows.
- First, the Court's tentative construction says nothing about a "framework." 15. Rather, the Court's tentative construction only requires a "structure." It is true that frameworks are structures, but not all structures are frameworks.
- Second, the Court's tentative construction requires only that the 16. "structure" be adapted to support or receive a shaving head of a shaving apparatus. Dr. Nayfeh redefines the Court's tentative claim construction so that the "structure" (presumably the framework) must support and receive a shaving head of a shaving apparatus.
- Dr. Nayfeh appears to have decided to craft his own "cradle structure" 17. definition instead analyzing the Court's tentative claim construction. Thus, even Dr.

Even assuming that the "art" were more limited, the opinions expressed in my First Expert Report

Nayfeh seems to acknowledge that the Court's tentative claim construction creates more questions than it answers.

- 18. Dr. Nayfeh next opines that "the prosecution histories of the patents-insuit are not at odds with the Court's construction or the ordinary artisan's understanding of the patents." I do not know what Dr. Nayfeh means by the "ordinary artisan's understanding of the patents" if the ordinary artisan's understanding differs from the Court's tentative construction of the "cradle structure" limitations.² I, however, have focused on the Court's tentative claim construction, and it remains my opinion that the prosecution histories of the patents-in-suit cannot be reconciled with the Court's tentative claim construction.
- 19. First, Dr. Nayfeh's discussion of the Lee Patent does not alter my opinion. Dr. Nayfeh argues that Braun "distinguished the Lee Patent as nonanalogous art," but Dr. Nayfeh appears to have misread the prosecution history. Braun did argue that the Lee Patent was non-analogous art, and, as discussed above, I disagree. The Examiner, however, never stated that he agreed with Braun. In fact, the Examiner continued to cite cleaning systems for items other than shavers following his citation of the Lee Patent, the most obvious example being the Schinn Patent. The Examiner thus did not appear to be persuaded by Braun's argument, and I am not either.
- 20. Dr. Nayfeh also points to the preamble of the '556 patent to argue that the "cradle structure" limitation, as tentatively construed by the Court, is not indefinite. Not

would not change.

To the extent that Dr. Nayfeh is permitted to explain what the understanding is, I reserve the right to analyze Dr. Nayfeh's explanation and respond to it.

only is this illogical, it distorts what actually occurred during prosecution. As Dr. Nayfeh appears to acknowledge, Braun never attempted to distinguish the Lee Patent on the ground that the Lee Patent was not "a cleaning device for cleaning a shaving head of a dry shaving apparatus." Instead, Braun specifically argued: "The specification makes it quite clear that 'a cradle adapted to receive therein a shaving head' is not an open basin into which the shaving apparatus can be tossed without any means to designed to particularly receive and/or cradle the shaving head." (Ex. 19, at B0000095.)

- As stated in my First Expert Report, the open basin in the Lee Patent --21. called a "receptacle" -- is obviously (1) a structure and (2) able to receive or retain fluid or both. The "receptacle" in Figure 5 of the Lee Patent also clearly could receive or support a shaving head of a shaving apparatus if appropriately sized.³ It thus remains my opinion that Braun's clear disclaimer of the receptacle in the Lee Patent could not be reconciled with the Court's tentative claim construction by one of ordinary skill in the art.
- Second, Dr. Nayfeh's discussion of the Schinn Patent also does not alter 22. my opinion. Dr. Nayfeh argues that Braun "objected the Lee Patent as nonanalogous art." Braun did argue that the Schinn Patent was non-analogous art, and, as discussed above, I disagree. The Examiner, however, never stated that he agreed with Braun. In fact, the Examiner continued to cite cleaning systems for items other than shavers following his citation of the Schinn Patent including a prior art reference related to cleaning. (Ex. 19, at B000098-100.) The Examiner thus did not appear to be persuaded by Braun's argument, and I am not either.

- 23. Dr. Nayfeh then argues: "In addition, Braun distinguished the Schinn paint equipment cleaner on the ground that the patent did not contain a cradle adapted to receive a shaving head. See id. at B000103. The Schinn device's hooks and wire baskets are adapted to receive paint equipment. See id." The Schinn device could have just as easily incorporated a structure to receive a shaving head. Dr. Nayfeh's argument regarding Braun's disclaimer proves my point that the Court's tentative construction is indefinite.
- As stated in my First Expert Report, the basket in the Schinn Patent is obviously (1) a structure and (2) able to receive or retain fluid or both. The basket also clearly could receive or support a shaving head of a shaving apparatus. Braun's ultrasonic cleaner appears to use the type of basket used in the Schinn Patent. (Ex. 17, Hoeser Dep., at 31-33.) Mr. Hoeser, in fact, agreed that the basket in Braun's ultrasonic cleaner is a "cradle." (Ex. 17, Hoeser Dep., at 32S.) It thus remains my opinion that Braun's clear disclaimer of the basket in the Schinn Patent could not be reconciled with the Court's tentative claim construction by one of ordinary skill in the art.
- 25. Third, Dr. Nayfeh's discussion of the Cunningham Patent does not alter my opinion. Dr. Nayfeh states: "As Braun explained in the prosecution history, the Cunningham patent does not teach a cradle to support an object into which cleaning fluid is feed that is above the fluid level of the cleaning fluid in the cleaning fluid container." (Second Nayfeh Report, at 26.) In so doing, Dr. Nayfeh has paraphrased the prosecution history.

Insofar as the receptacle of the Lee Patent is not drawn to scale, one of ordinary skill in the art

structure adapted to receive an object to be cleaned and to which cleaning fluid is fed arranged above a fluid level of the cleaning fluid in a cleaning fluid container, as claimed." (Ex. 12, at B000335.) As stated in my First Expert Report, the basket in the Cunningham Patent is "a cradle structure adapted to receive an object to be cleaned," as construed by the Court. The basket obviously is (1) a structure and (2) able to receive or retain fluid or both. The basket also clearly could receive or support a shaving head of a shaving apparatus. Braun's ultrasonic cleaner appears to use the type of basket used in the Schinn Patent. (Ex. 17, Hoeser Dep., at 31-33.) Mr. Hoeser, in fact, agreed that the basket in Braun's ultrasonic cleaner is a "cradle." (Ex. 17, Hoeser Dep., at 32S.) The basket in the Cunningham patent is lowered into the cleaning fluid container, thereby feeding the fluid. It thus remains my opinion that Braun's clear disclaimer of the basket in the Cunningham Patent could not be reconciled with the Court's tentative claim construction by one of ordinary skill in the art.

B. WRITTEN DESCRIPTION

27. I understand that, in order for a patent claim to be valid, the written description in the specification must clearly allow one of ordinary skill in the art to recognize that the inventor invented what is claimed. I further understand that there can be no written description for what the inventor did not conceive. It remains my opinion that there is no written description in the patents in suit for the "cradle structure" limitations, as construed by the Court. More particularly, there is no written description

in either patent specification which would allow one of ordinary skill in the art to recognize that Gebhard Braun (or Dr. Dietrich Pahl) invented a structure adapted to support or receive a shaving head of shaving apparatus that receives, but does not retain fluid.

28. Dr. Nayfeh appears to acknowledge that the specifications for the patents in suit only describe a "cradle structure" that both receives and retains fluid. Dr. Nayfeh states:

In the preferred embodiment, for example, the cradle is able to receive and retain fluid because the outlet port of the cradle is dimensioned such that the inflow of cleaning fluid from the pump is greater than the outflow of cleaning fluid. However, it would be clear to one of ordinary skill in the art that if the outlet port of the cradle were of a greater cross-sectional area, the inflow of cleaning fluid would be smaller than the outflow. In such a configuration, the cradle 7 would receive, but not retain cleaning fluid.

(Second Nayfeh Report, at 27.)

- 29. Dr. Nayfeh thus concedes that there is no written description in either patent specification for a "cradle structure" that receives, but does not retain cleaning fluid. He then offers speculation as to what would be "clear to one of ordinary skill in the art" which, in my opinion, is not a substitute for actual written description.
- 30. I moreover disagree with Dr. Nayfeh that it would be "clear" to the ordinary artisan that the "cradle 7" could be modified as he suggests. Mr. Braun has testified that in his design, if fluid were not retained in the "cradle structure," the cleaning process would be no different than merely running the shaver in air. (Ex. 16, Braun Dep., at 75.) Put simply, Mr. Braun expressed that the device he conceived (with Dr. Pahl) would not clean without the retention of fluid in the cradle. In my opinion, one of

ordinary skill in the art would not consider modifying the device disclosed in the patents in suit as Dr. Nayfeh suggests, such that it could not perform the intended function -- cleaning.

- 31. Dr. Nayfeh then points to claim 2 of the '328 patent, stating "I understand that limitations from the preferred embodiment ought not to be inserted into the claims." (Second Nayfeh Report, at 27.) Dr. Nayfeh's reliance upon claim 2 is an illogical red herring for a number of reasons.
- 32. First, while I have opined that the Court's claim construction should be modified in my Second Expert Report, the focus in my First Expert Report is whether there is written description for the "cradle structure" limitation, as construed by the Court. Claim 2 simply recites a characteristic of the only embodiment of the "cradle structure" described in the patents in suit, and it thus provides no additional written description.⁴
- as of the filing date of the patents in suit -- here, January 1995. Claim 2 is similar to a claim that was originally filed, but it was amended during prosecution. (Ex. 12.) Claim 2 depends from claim 1, and claim 1 was substantially amended during prosecution. (Ex. 12.) One of ordinary skill in the art therefore would not even have had access to claim 2 in January 1995, further demonstrating the illogic of Dr. Nayfeh's reliance upon claim 2.

Dr. Nayfeh's reliance upon claim 2 also does not change my opinion that the Court's claim construction should be modified. I am aware that limitations from dependent claims should not be read into an independent claim. I, however, propose that the Court's construction should read "a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive and retain fluid," My proposed construction does not recite or imply anything about the cross-sectional area of an outlet port of a "cradle structure" (assuming that a particular "cradle structure" even has an outlet port).

- 34. Third, even if claim 2 assisted Braun with respect to the '328 patent, claim 2 does not appear in the '556 patent. There is also nothing analogous to claim 2 in the '556 patent. It thus appears that Dr. Nayfeh made a mistake in asserting that claim 2 of the '328 patent provides written description for the '556 patent.
- Nayfeh asserts that "Dr. Pahl testified that he had conceived of a cleaning system wherein liquid was not retained by the cradle, but was flushed through the shaver head." (Second Nayfeh Report, at 27.) At the page cited by Dr. Nayfeh, Dr. Pahl actually responds to an inquiry as to the differences (if any) between Dr. Pahl's cleaning device and a dishwasher. Dr. Pahl responded by noting that someone at Braun considered spraying cleaning fluid but decided not to pursue the thought. (Ex. 14, at 80.) This is hardly a statement that Dr. Pahl conceived of a cleaning system in which fluid is flushed through the shaver head, as in Rayovac's cleaning system. Dr. Pahl, in fact, testified that he did not know when this idea arose or whether it was ever tested. It appears that at some undisclosed time Dr. Pahl (or some other individual) may have had an abstract idea and never followed up with it. I am aware of no documents that substantiate Dr. Pahl's testimony.
- 36. Put simply, the fact that fluid would be sprayed into the "cradle" does not imply that fluid would not have been retained by the cradle. It thus remains my opinion that Dr. Pahl and Mr. Braun never conceived of a cleaning system in which the "cradle structure" received, but did not retain cleaning fluid.

C. NEW MATTER

- 37. I understand that the introduction of new matter invalidates a patent if the patentee represented that no new matter had been introduced in the corresponding patent application. I further understand that amendments to the claims or the specification of a predecessor application are new matter unless the predecessor application would reasonably convey to one of ordinary skill in the art that the inventor had possession of the amended subject matter when the predecessor application was filed.
- Dr. Nayfeh appears to opine that that the terms "receptacle" and "cradle 38. structure" mean the same thing. For reasons set forth at Paragraphs 55-59 of my First Expert Report, I disagree.
- 39. Dr. Nayfeh's opinion simply ignores reality. As discussed above in connection with my indefiniteness opinion, Braun explicitly stated that the Lee Patent lacked a "cradle structure" in response to a rejection from the Examiner. In particular, Braun argued that the "receptacle 10" in the Lee Patent was "not adapted to 'cradle' anything[,] [sic] much less a shaving head. The specification makes it quite clear that 'a cradle adapted to receive therein a shaving head' is not an open basin into which the shaving apparatus can be tossed without any means designed to particularly receive and/or cradle the shaving head." (Ex. 19, at B000096.) If Braun's U.S. application claims had read a "receptacle adapted to receive therein a shaving head," Braun would not have argued that "receptacle 10" in the Lee Patent is not a "receptacle." Braun placed significance on the word "cradle" that would otherwise have been unavailable with the

word "receptacle." This example based upon facts demonstrates that Dr. Nayfeh's opinion is wrong.

described in the '328 Patent specification was not in the corresponding German application." (Second Nayfeh Report, at 27 n. 1.) He then cites to an "addendum to the corresponding German application" filed in October 1994. Dr. Nayfeh is the only one who has made a mistake. In my First Expert Report, I analyzed the question whether the '328 patent added new matter to the German application filed in January 1994 to which the '328 patent claims priority. I obviously did not address Braun's subsequent modifications to the German application. That said, Dr. Nayfeh tacitly concedes that the '328 patent's discussion of the French '111 patent does not appear in the January 1994 German priority application.

D. BEST MODE

41. I understand that a patent is invalid if an inventor fails to disclose the best mode contemplated by him, as of the time his patent application was filed, of carrying out his invention. I also understand that the written description of a patent is viewed from the perspective of one of ordinary skill in the art in determining whether a best mode of practicing an invention was concealed. It remains my opinion that the patents in suit do not disclose the cleaning fluid preferred by the inventor or inventors (if Dr. Pahl is joined as an inventor).⁵

I understand that Braun has not yet produced any information concerning the chemical composition of the inventor(s)' preferred cleaning fluid. To the extent that Braun does produce such information, I reserve the right to comment upon it.

- 42. Dr. Nayfeh begins his opinion by acknowledging that Dr. Pahl knew that his preferred cleaning fluid "had to be fat soluble and talcum soluble." (Second Nayfeh Report, at 28.) As expressed in my First Expert Report, the only thing either patent discloses regarding the cleaning fluid is that it should be "fat dissolving." The patents in suit do not say anything about talcum solubility, and Dr. Nayfeh does not appear to disagree.
- 43. Dr. Nayfeh then opines that "the phrase 'fat-dissolving cleaning fluid' would immediately suggest to one skilled in the art the use of an alcohol-based cleaning fluid." (Second Nayfeh Report, at 28.) Dr. Nayfeh thus appears to acknowledge that the patents in suit do not disclose the use of an alcohol as the main ingredient of the preferred cleaning fluid.
- 44. Moreover, one of ordinary skill in the art would be aware of alcohol-based solvents. I, however, disagree that the words "fat-dissolving" would "immediately" lead one of ordinary skill in the art to an alcohol-based cleaning fluid. Simply, there would be many types of cleaning fluids available to one of ordinary skill in the art that could also dissolve fat. Examples include (1) naptha and (2) detergent mixed with water. The specifications of the patents in suit do not disclose which among many such cleaning fluids the ordinary artisan should select.
- 45. Next, without any support, Dr. Nayfeh opines that, "because the application is cleaning a shaving head, one of ordinary skill in the art would recognize that a lubricant would be desired to maintain the integrity of the cutters within the shaving head." (Second Nayfeh Report, at 29.) Again, Dr. Nayfeh appears to

acknowledge that the specifications of the patents in suit disclose nothing about using a lubricant in the cleaning fluid.

- 46. As stated in my First Expert Report, one of ordinary skill in the art would not expect to put a lubricant in the cleaning fluid. At a minimum, this would change the viscosity of the cleaning fluid that Dr. Pahl believed to be important. As a practical matter, one of skill might expect to lubricate following cleaning as with the cleaning of a gun. But, it remains my opinion that it would be counter-intuitive to one of ordinary skill to put a lubricant in the cleaning fluid.
- 47. I also disagree with Dr. Nayfeh that there are "several reasons" that one of ordinary skill in the art would "desire" a cleaning fluid based with "low viscosity." (Second Nayfeh Report, at 29.) Again, Dr. Nayfeh appears to acknowledge that the patents in suit disclose nothing about the viscosity of the cleaning fluid. In any event, it is my opinion that wetting and surface tension would be of interest to one of ordinary skill in the art, but viscosity would not.
- 48. Dr. Nayfeh finally opines that one of ordinary skill in the art would "know that a fragrance would be desired" because the "cleaning product is a personal hygiene product." (Second Nayfeh Report, at 29.) As with all other attributes of Dr. Pahl's preferred cleaning fluid, Dr. Nayfeh appears to acknowledge that the specifications of the patents in suit disclose nothing about the use of a fragrance. I moreover disagree with Dr. Nayfeh that one of ordinary skill in the art would consider the cleaning device of the patents in suit a "personal hygiene product." A toothbrush or a wash cloth is a personal hygiene product. The cleaning device described in the patents in suit is not.

49. It thus remains my opinion that the patents in suit fail to disclose the best mode of practicing the claimed invention contemplated by the inventor(s).

E. INVENTORSHIP

a. Norbert Smetana

- 50. Dr. Nayfeh states that he disagrees with my opinion that Mr. Smetana at least jointly conceived the idea for claim 13 of the '328 patent because (1) Dr. Pahl testified that his original prototype had a heater and an impeller and (2) Mr. Hoeser testified that Dr. Pahl's November 1992 presentation illustrates a heater and a fan. (Second Nayfeh Report, at 29.) Neither justification provided by Dr. Nayfeh changes my opinions.
- 51. It is true that Dr. Pahl testified that his original prototype contained an impeller and a heater. It is possible that Dr. Pahl's memory was a bit off as I have seen no documents corroborating his recollection. Moreover, the August 1993 memorandum from Mr. Smetana to Mr. Braun, Dr. Pahl and Dr. Jung indicates that the prototype Mr. Smetana blew cold air to dry the shaver. (Ex. 29.) The same memorandum also concludes with Mr. Smetana's recommendation that a heater be combined with the fan. (Ex. 29.) In my experience, an engineer would not recommend to his superiors the inclusion of a feature already present in a prototype.
- 52. I have analyzed the November 1992 presentation (Pahl exhibit 27) noted by Dr. Nayfeh, and I can locate no drawing or description corresponding with the use of an impeller and heater for drying. (Ex. 38.) Mr. Hoeser likewise was unable to find the

impeller and heater in Dr. Pahl's presentation. (Ex.17, at 82.) The November 1992 presentation offers no evidence which would persuade me to alter my opinion.

- 53. Finally, Dr. Nayfeh states that "the use of heat to speed drying was well known by one of ordinary skill in the art prior to Mr. Smetana's involvement in the cleaning device." (Second Nayfeh Report, at 29.) I do not disagree. Indeed, it is my opinion that the use of a fan to speed drying was also well known to one of ordinary skill in the art, and claim 12 of the '328 patent is at least obvious. Assuming my opinions regarding claim 12 were found to be correct, Dr. Nayfeh presumably would not disagree that claim 13 is also at least obvious.
- 54. However, to the extent that claims 12 and 13 are found to be non-obvious (although I cannot see how), it remains my opinion that Mr. Smetana at least jointly conceived of the alleged invention of claim 13.

b. Helmut Kraus

- 55. Dr. Nayfeh states that he disagrees with my opinion that Mr. Helmut Kraus was the first person to conceive the idea for claim 19 of the '328 patent. To do so, Dr. Nayfeh distorts the deposition testimony of Mr. Braun and Dr. Pahl.
- 56. At page 77 of Mr. Braun's deposition, he testified that he "knew that the customer should not remove the device while it was wet" from his past experience. (Ex. 16, at 77.) Contrary to Dr. Nayfeh's statement, Mr. Braun did not testify that he was aware of the need for an interlock. (Second Nayfeh Report, at 30.)

- 57. At pages 68-69 of Mr. Braun's deposition, he testified that he improved Dr. Pahl's original prototype by adding an interlock. (Ex. 16, at 68-69.) Despite what Dr. Nayfeh opines, Mr. Braun did not testify that the interlock was his idea.
- 58. Dr. Pahl did not confirm "Mr. Braun's recollection" in his testimony. Rather, he stated that he "assumed" that Mr. Braun had invented the interlock. As stated at Paragraphs 74-80 of my First Expert Report, Dr. Pahl testified later in the day that he most likely conveyed Mr. Kraus' suggestion to Mr. Braun personally, and Mr. Braun then implemented it.
 - 59. Thus, none of the testimony cited by Dr. Nayfeh changes my opinion.
- 60. Dr. Nayfeh also opines that "[Mr. Kraus'] suggestion itself does not disclose how or where the lock should be implemented." (Second Nayfeh Report, at 30.) I disagree.
- 61. As discussed further below in connection with my obviousness opinion, the obvious way to implement Mr. Kraus' suggestion for an interlock would be with a bracket with a built-in switch. It is my opinion that any additional work performed by Mr. Braun would have required no more than routine engineering. Thus, to the extent the interlock is inventive (and Dr. Nayfeh does not argue it is not), it remains my opinion that Mr. Kraus conceived of the idea for claim 19 of the '328 patent.

F. ANTICIPATION

62. I have analyzed whether various prior art references anticipate the asserted claims of the patents-in-suit. I understand that in order to anticipate a prior art reference must disclose each element of a particular claim.

The '556 Patent

U.S. Patent No. 3,365,267 ("MeKiney") a.

Claim 1

- The McKiney Patent discloses "a cleaning device for cleaning a shaving 63. head of a dry shaving apparatus" for reasons set forth at Paragraph 83 of my First Expert Report. Dr. Nayfeh opines that "the MeKiney Patent discloses a sterilizing device for sterilizing clipper blades that have been disassembled from the head of a clipper apparatus. It does not disclose a device for cleaning the clipper head itself." (Second Nayfeh Report, at 15.)
- Dr. Nayfeh appears to agree with my opinion that a hair clipper is a type 64. of dry shaving apparatus. He, however, implies that the preamble of the '556 patent requires a degree of cleaning of the "shaving head." Dr. Nayfeh is wrong.
- As recognized in the MeKiney Patent, it is essential that the clipper blades 65. of the hair clipper be cleaned. The preamble of the '556 patent is silent as to the degree of cleaning of the "shaving head." Cleaning the clipper blades in the MeKiney Patent is all that is necessary for the "shaving head" of the hair clipper to be cleaned in the cleaning device. I thus disagree with Dr. Nayfeh that the MeKiney Patent does not disclose the preamble limitation.
- 66. The MeKiney Patent discloses "a cradle structure adapted to receive therein the shaving head" for reasons set forth at Paragraphs 84-85 of my First Expert Report. I understand that the Court has tentatively construed the element-at-issue to

mean "a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both."

- 67. In connection with claim 11 of the '328 patent, Dr. Nayfeh states that shelf 44 of the McKiney Patent "is not adapted to support or receive anything." (Second Nayfeh Report, at 3.) Dr. Nayfeh's opinion is startling insofar as the McKiney Patent explicitly states: "[Shelf 44] is specifically adapted to support clipper blades[.]" (Ex. 8, at col. 3. 1. 37.) In light of the explicit disclosure in the McKiney Patent, I must disagree with Dr. Nayfeh.
- 68. Dr. Nayfeh then states that shelf 44 "cannot be properly called a 'cradle structure adapted to receive a shaving head of a shaving apparatus,' which one skilled in the art would understand to require a structure of form and dimensions to 'cradle' the shaving head." As was the case with indefiniteness, Dr. Nayfeh appears to ignore the Court's tentative construction of the "cradle structure" limitation.
- distinguish the shelf 44 of the MeKiney Patent is reminiscent of Braun's attempt to distinguish the receptacle of the Lee Patent during prosecution. Nothing in the Court's construction requires that the "cradle structure" have any particular form and dimensions as Dr. Nayfeh implies. Simply, Braun stated at the Markman Hearing that it agreed with the Court's tentative construction of the "cradle structure" limitation, and I do not understand why Dr. Nayfeh is trying to avoid that construction now.
- 70. Finally, Dr. Nayfeh states that the "cradle structure of claim 11 is adapted to receive the shaving head of a dry shaving apparatus, without disassembly of the

shaving head into its cutter and foil components. Indeed, the '328 Patent is clear that the invention does not involve disassembly of the shaving head of the shaving apparatus." (Second Nayfeh Report, at 4.) Dr. Nayfeh then goes on to cite a number of portions of the '328 patent specification.

- 71. The problem with Dr. Nayfeh's opinion is that none of his citations say anything as to whether the "cradle structure" may only receive a the head of an assembled shaver. Indeed, the words "assemble," "disassemble," or "disassembly" do not appear in the patent at all. There is simply nothing in the specification or the claims that says that the cleaning device of the '556 patent cannot be used to clean a disassembled shaving head. Again, I have reviewed the Markman briefing and the transcript from the Markman Hearing, and I can locate nowhere any argument that the "cradle structure" limitation should be defined as Dr. Nayfeh suggests.
- 72. Dr. Nayfeh's citations also imply that removing the clipper blades from the hair clipper is a difficult process. Nothing could be further from the truth. I have analyzed a hair clipper, and removal of the clipper blades is simple. I intend to explain the hair clippers to the jury, and I have attached pictures of the hair clippers with the blades attached and removed. (Ex. 39)
- 73. Finally, Dr. Nayfeh's opinion that the claimed "cradle structure" only receives an assembled shaving head with "foil components" is troubling insofar as he has also opined that Rayovac's rotary products infringe the patents in suit. If this is indeed

Dr. Nayfeh incorporates his discussion of the MeKiney Patent for claim 11 of the '328 patent into claim 1 of the '556 patent.

his opinion, I assume that he will withdraw his opinion that Rayovac's rotary products infringe.

- 74. I understand that the Court has tentatively construed the term "a cleaning fluid container separate from the cradle structure for holding a cleaning fluid" to mean "a separate cleaning fluid that is a removable cartridge which holds cleaning fluid." I also understand that Braun will argue that Rayovac's accused products have a "removable cartridge which holds cleaning fluid." As stated at Paragraph 85 of my First Expert Report, if Dr. Nayfeh is correct that the claim limitation reads on Rayovac's products, the MeKiney Patent discloses the limitation.
- 75. Dr. Nayfeh opines that "one skilled in the art would understand that a cartridge is a case or container that holds a substance, device, or material which is difficult, troublesome, or awkward to handle and that usually can be easily changed." (Second Nayfeh Report, at 16.) Dr. Nayfeh then opines that tank 14 of the McKiney Patent is not "readily removable from the cleaning device and therefore, not a removable cartridge."
- 76. I initially disagree with Dr. Nayfeh that it is necessary to construe the Court's construction, in particular the word "cradle." One of ordinary skill in the art (and lay people as well) knows what a cartridge is.
- 77. Moreover, I disagree with Dr. Nayfeh that a cartridge is not a "cartridge" unless it is readily removable. The oil filter in a car is a cartridge, and anyone who has removed one knows that it is a time-consuming process.

78. Further, tank 14 can be readily separated from tank 12. As shown in Figure 3, between flexible conduit 18 and tube 20 there is depicted an enlarged portion of hose, thus forming a joint that could be readily disconnected.

Claim 6

79. The McKiney Patent discloses "the cleaning fluid container includes ports through which cleaning fluid passes in and out of the cleaning fluid container." Dr. Nayfeh does not disagree with me.

Claim 18

80. The McKiney Patent discloses "the cradle structure is open towards atmosphere and is supplied with cleaning fluid from the cleaning fluid container by means of the fluid feed mechanism." Dr. Nayfeh does not disagree with me.

b. U.S. Patent No. 3,500,840 ("Maatz")

Claim 1

- 81. Claim 1 first requires: "A cleaning device for cleaning a shaving head of a dry shaving apparatus." The Maatz Patent discloses this element in its teaching of a device for washing barber's tools. (Ex. 10, at col. 1, l. 3 & col. 2, ll. 10-11.)
- 82. As with the McKiney Patent, Dr. Nayfeh again opines that the Maatz Patent does not disclose the preamble limitation because "the Maatz device would require disassembly of the clipper head and removal of the clipper blades." (Second Nayfeh Report, at 16-17.) For reasons set forth at Paragraphs 92-101, I disagree.
- 83. The Maatz Patent discloses "a cradle structure adapted to receive therein the shaving head." I understand that the Court has tentatively construed the element-at-

issue to mean "a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both." "Cleaning tank [10] is provided with a rack 15 and a series of magnets 16 for holding the tools while they are cleaned. A grid 17 is mounted in the tank for holding larger tools." (Ex. 10, at col. 2, 11. 27-30.)

- 84. Dr. Nayfeh concedes that the cleaning device of the Maatz Patent would be used to clean clipper blades. For reasons discussed above, it is my opinion that receipt of the clipper blades constitutes receipt of a "shaving head."
- 85. Dr. Nayfeh then opines: "Rack (15) and grid (17) merely provide surfaces onto which clipper blades that have been disassembled from the head of a hair clipper apparatus can be supported by means of magnets." (Second Nayfeh Report, at 8.) The Maatz Patent, in fact, explicitly states: "The tools to be cleaned are placed in the cleaning tank either by positioning them in the rack 15 ort laying on the grid 17." (Ex. 10, col. 3, 11. 2-4.)
- 86. I, however, disagree with Dr. Nayfeh that "[s]uch surfaces cannot be properly called 'cradle structures' and are not adapted to receive a shaving head of a shaving apparatus." Again, Dr. Nayfeh appears to be running away from the Court's construction. The rack and grid obviously (1) are "structures" and (2) at least receive cleaning fluid. Moreover, as the quote from the Maatz Patent above makes explicit, the rack and grid receive and support the clipper blades, which are the head of the hair clipper.
- 87. It thus remains my opinion that the Maatz Patent anticipates claim 1 of the '556 patent.

Claim 6

88. The Maatz Patent discloses "the cleaning fluid container includes ports through which cleaning fluid passes in and out of the cleaning fluid container." Dr. Nayfeh does not disagree with me.

Claim 18

89. The Maatz Patent discloses "the cradle structure is open towards atmosphere and is supplied with cleaning fluid from the cleaning fluid container by means of the fluid feed mechanism." Dr. Nayfeh does not disagree with me.

The '328 Patent

U.S. Patent No. 3,365,267 ("MeKinev") c.

<u>Claim 11</u>

- 90. The McKiney Patent discloses "a cradle structure adapted to receive a shaving head of a shaving apparatus." I understand that the Court has tentatively construed the element at issue to mean "a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both." For reasons set forth at Paragraphs 102-108, I disagree with Dr. Nayfeh that the MeKiney Patent does not disclose the "cradle structure" limitation.
- 91. Moreover, the claims of the '328 patent are not limited to a "dry shaving apparatus." Rather, the '328 patent claims the broader "shaving apparatus," a term that includes both hair clippers and razors. Dr. Nayfeh tries to escape that fact by arguing incorrectly that "the cradle structure of claim 11 is adapted to receive the shaving head of a *dry* shaving apparatus." (Second Nayfeh Report, at 4.)

92. In addition to the hair clippers cleaned in the MeKiney Patent, the MeKiney Patent also discloses the cleaning of a razor 42, a "shaving apparatus," with liquid. (Ex. 8, at Fig. 3.) Razor 42, which has not been disassembled, is held in slot 38 and received by tank 12. Both slot 38 and tank 12 are (1) structures; (2) adapted to receive or support a shaving apparatus; and (3) able to at least receive cleaning fluid. Dr. Nayfeh has failed to offer any response to this aspect of my opinion.

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- 93. I understand the Court has construed the term "a drying device" to mean "a device to dry the shaver head." The MeKiney Patent discloses a "drying device." In particular, the siphon tube 24 acts to automatically drain the fluid from container 12, allowing the cleaned shaver head to dry. (Ex. 8, at col. 4, II. 12-13.)
- 94. Dr. Nayfeh opines that the siphon tube 24 is not a "drying device" because "it is not a mechanism for active drying of the barber tools." (Second Nayfeh Report, at 4.) As with the "cradle structure" limitation, Dr. Nayfeh appears to be trying to avoid the claim construction advocated by Braun and agreed to by the parties. The agreed construction requires only a "device," and it does not require that that the drying be "active."
- 95. Aside from his modification of the parties' agreed construction, Dr. Nayfeh does not appear to quarrel with my opinion that the siphon tub assists in the drying of the cleaned barbers' tools. Simply, without the siphon tube, the barbers' tools could not drip dry, and the barber would need to dry them with, for example, a towel.
- 96. It thus remains my opinion that the McKiney Patent discloses a drying device.

Claim 14

I incorporate by reference my discussion of the elements common to both 97. claim 11 and claim 14 from above. I note that Dr. Nayfeh does not disagree that the tank 12 and shelf 44 are "permanently open to the atmosphere."

Claim 18

- I incorporate by reference my discussion of the elements common to both 98. claim 11 and claim 18 from above.
- Claim 18 recites "a bracket for insertion of the shaving apparatus therein." 99. I understand that the Court has tentatively construed the term "bracket" to mean "a bracket or projecting support." The MeKiney Patent discloses a bracket or projecting support for insertion of the shaving apparatus therein including shelf 34, slot 38, and magnets 46.
- Dr. Nayfeh concedes that a shelf "in certain circumstances" may be 100. considered a bracket or projecting support. He also concedes that "shelf 34 is designed to hold scissors and wet razors." That is precisely the point. As discussed above, Dr. Nayfeh completely ignores my opinion that the '328 patent covers both wet and dry shaving apparatuses. Dr. Nayfeh's opinion that "a hair clipper apparatus" is my "supposed shaving apparatus" rests on a faulty premise. It is true that one shaving apparatus disclosed in the MeKiney Patent is a hair clipper. But, it is equally true that another shaving apparatus is the wet razor illustrated as item 42 in Figure 3. As Dr. Nayfeh has misunderstood my opinion and read an improper limitation into the '328 patent, nothing he has said alters my opinion.

101. Moreover, Dr. Nayfeh opines that magnets 46 are not "properly considered a bracket by one of ordinary skill in the art," but he provides no reason why not. It is thus difficult for me to comment on his reasoning. Nevertheless, for reasons set forth at Paragraphs 111-112 of my First Expert Report, I disagree with him.

d. U.S. Patent No. 3,478,758 ("Davies")

Claim 11

- 102. The Davies Patent discloses "a cradle structure adapted to receive therein the shaving head." I understand that the Court has tentatively construed the element-at-issue to mean "a structure adapted to support or receive a shaving head of a shaving apparatus and able to receive or retain fluid or both." The Davies Patent discloses: "[I]mplement positioning means 20 comprises a perforated tray 74 for holding an implement to be washed and sterilized and locating the instrument in its aforementioned washing and sterilizing positions." (Ex. 9, at col. 4, II. 34-36.)
- Davies patent teaches support of clipper blades by brushes rather than placement into the tray." (Second Nayfeh Report, at 6.) It is true that the brushes in the Davies Patent are used to clean clippers. The Davies Patent says nothing about "support" by brushes. But, the liquid cleaning device in the Davies Patent is used for all implements, the only implement specifically named being a hair clipper.
- 104. Braun has argued that brushes are not preferred for cleaning the head of a shaving apparatus. (Ex. 35.) Accordingly, one of ordinary skill would necessarily recognize that the hair clippers could be cleaned with the cleaning fluid of the Davies

Patent. Dr. Nayfeh appears to acknowledge this in his discussion of how the clipper blades would be positioned on the tray 74.⁷

- 105. Dr. Nayfeh then opines: "The tray 74 could provide a surface onto which clipper blades that have been disassembled from the head of a hair clipper apparatus can be support[ed] [sic] by means such as magnets. Such a surface cannot be properly called a 'cradle structure' and is not adapted to receive the shaving head of a shaving apparatus." (Second Nayfeh Report, at 6.)
- 106. Dr. Nayfeh again appears to be relying upon his erroneous reconstruction of the Court's tentative claim construction. The tray 74 of the Davies Patent obviously (1) is a structure and (2) able to receive cleaning fluid.⁸ Moreover, for reasons set for above, the tray 74 at least receives the clipper blades which are the head of a shaving apparatus. It thus remains my opinion that the Davies Patent discloses the "cradle structure" limitation.
- 107. The Davies Patent discloses "a feed device for feeding cleaning fluid from said cleaning fluid container to said cradle structure." In the Davies Patent, fluid is fed from an external source through fitting 80. (Ex. 9, at col. 4, ll. 66-69.)
- 108. Dr. Nayfeh opines that the Davies Patent discloses manual feeding of cleaning fluid through a hose to the fitting 80. (Second Nayfeh Report, at 6.) He then states: "This manner of feeding is not properly considered a mechanism that feeds

It would at least be obvious to clean the clipper blades in the tray 74 of the Davies Patent.

Here and at other places in his report, Dr. Nayfeh seems to argue that a surface cannot be a "structure." I find this opinion particularly inconsistent with his opinion that the "cradle structure" limitation reads on, for example, the exterior surfaces of the injection nozzles in Rayovac's accused products.

cleaning fluid." I do not see how Dr. Nayfeh can possibly believe that a hose and a water tap are not a fluid feed mechanism. Both the ordinary artisan and lay people regularly use a hose and a water tap to "feed" water for uses such as watering their lawns. Indeed, the Davies Patent states: "The liquid 14 is initially fed to the container 12, through the fitting 80[.]" (Ex. 9, col. 4, 11. 72-74.) I thus strongly disagree with Dr. Nayfeh.

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- 109. Dr. Nayfeh then opines that "the Davies device provides no mechanism for feeding cleaning fluid from container 12 to tray 74, Mr. Phillips' supposed cradle structure." (Second Nayfeh Report, at 6.) The Davies Patent states: "Liquid is initially fed to the container 12, through fitting 80, until the liquid level rises above the implement on the tray." (Ex. 9, at col. 4, Il. 73-75.) That is, during feeding, the level of fluid in the container rises until it reaches the tray. Given the design of the device in the Davies Patent, I can see no other way that the fluid could be fed to the tray, and I strongly disagree with Dr. Nayfeh's opinion.9
- 110. I understand that the Court has construed the term "said cradle structure being arranged above a fluid level of the cleaning fluid in said cleaning fluid container during the feeding of said cleaning fluid to said cradle structure" to mean "during the feeding operation, the cradle structure is above the fluid level of the fluid in the cleaning fluid container." In one embodiment of the Davies Patent, the "cradle structure" is above the level of the cleaning fluid in the container 12 prior to the washing. "According to the alternative method ... of locating an implement in its washing and sterilizing positions, the implement tray 74 is supported in its elevated position of FIGURE 3, and the liquid